

**DEFENSE THREAT REDUCTION AGENCY**



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# ***CTR RUSSIAN WEAPONS OF MASS DESTRUCTION (WMD) SECURITY PROGRAM***

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NDIA Security Division  
Symposium & Exhibition  
Reston, VA  
27 June 2002

# *The Strategic Challenge Of The New Millennium*

*To REDUCE THE THREAT of  
weapons of mass destruction as  
COMPLEX SECURITY ISSUES  
continue to challenge our nation*

*“The Defense Threat Reduction Agency safeguards America and its friends from  
weapons of mass destruction by reducing the present threat and  
preparing for the future threat.”*



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# ***DTRA*** Is a Defense Combat Support Agency



***The Pentagon***

***Reporting to the Assistant to the Secretary of  
Defense for Nuclear, Chemical and Biological  
Defense Programs***

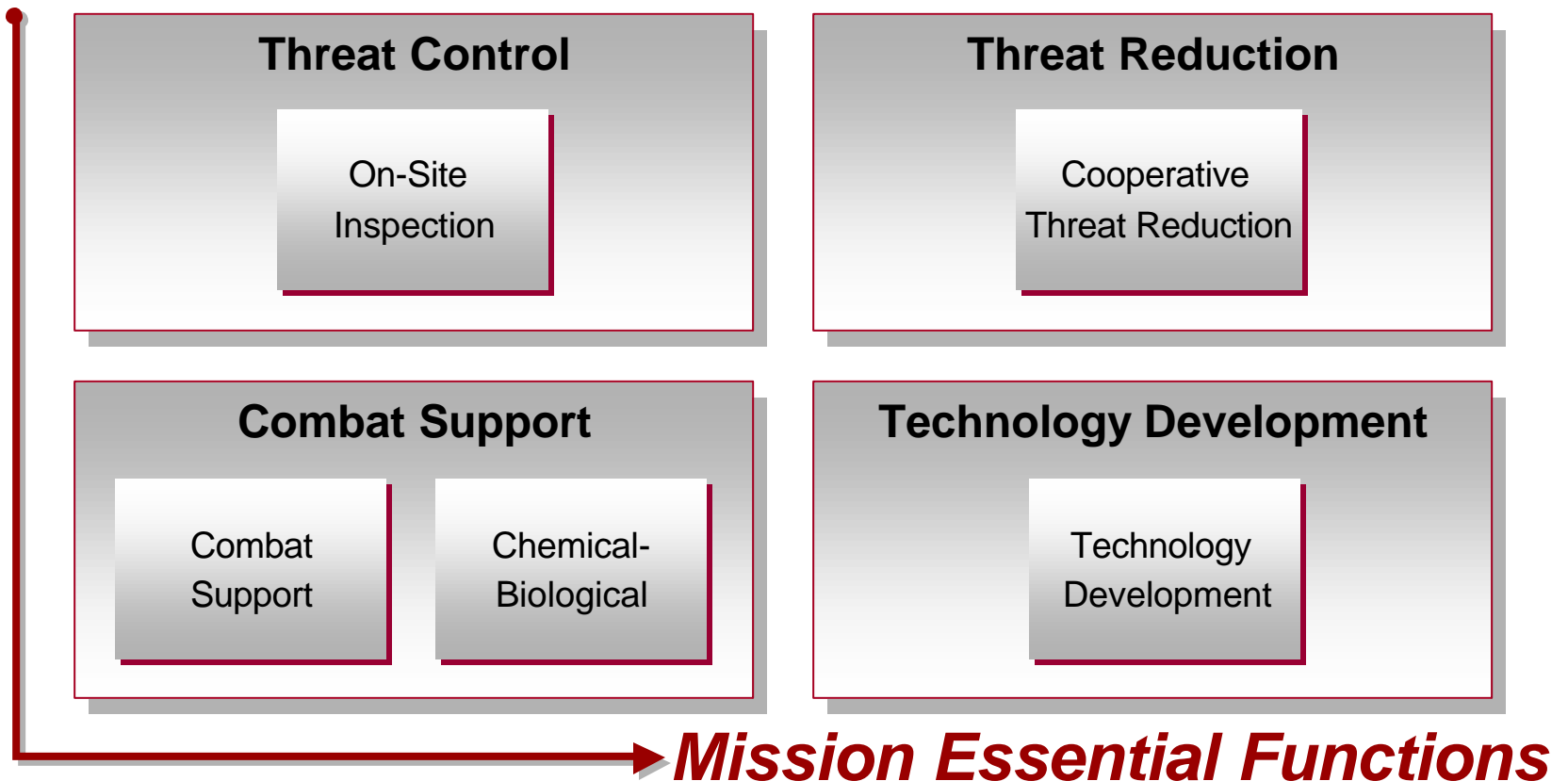


***McNamara HQC Building***



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# ***DTRA Is Organized According to Mission Functions***



# CTR Mission

*Provide assistance to eligible  
states of the former Soviet Union  
(FSU) in order to dismantle  
weapons of mass destruction  
(WMD) and to reduce the threat of  
WMD proliferation*



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# *CTR Mission Objectives*

- **Objective 1: Dismantle Former Soviet Union (FSU) Weapons of Mass Destruction (WMD) and Associated Infrastructure,**
- **Objective 2: Consolidate and Secure FSU WMD and Related Technology and Materials,**
- **Objective 3: Increase Transparency and Encourage Higher Standards of Conduct, and**
- **Objective 4: Support Defense and Military Cooperation With the Objective of Preventing Proliferation.**

# *CTR WMD Security Program*

- *CTR Missions Accomplished Through the CTR Umbrella Agreements*
- *Program Goals:*
  - Enhance security of nuclear weapons in Russia
  - Enhance security of biological weapons in FSU
  - Enhance security of chemical weapons in Russia
  - Enhance security of fissile material storage facility in Mayak, Russia



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# *US & Russian Nuclear Security Standards*

## ORGANIZATIONAL

**DoD 5210.41**

...DoD guidance  
supplemented by each  
Services' unique  
regulations...

**Russian Forces  
Directive N° 264**

...Top-level direction for  
national nuclear security  
mission. MOD responsible  
for execution with military  
services.

## TECHNOLOGICAL

**DoD**

...Nuclear equipment testing,  
training, and integration  
unique to each Service...

**MOD**

...Nuclear equipment testing,  
training, and integration across  
all MOD...



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# *Nuclear Weapons Storage Security Projects*



Security Assessment and Training Center (SATC) -- Sergiev Posad



Center for Technological Diagnostics



Nuclear Weapons Storage Site Enhancements



Automated Inventory Control and Management System



Personnel Reliability Program



Guard Force Training



Dosimeters



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# ***WMD Physical Protection System (PPS) Stages***

- **Security Assessment and Training Facility (SATC)** - Test PPS equipment
- **Security Enhancements** - used for MOD immediate security needs
- **Urgent Quick Fix PPS** - used to secure individual bunker perimeters
- **Rapid Deployable Sensors** - used to satisfy temporary security needs
- **Controlled Area Fence** - used to secure stockpile site outer perimeters
- **Comprehensive PPS** - additional tested and selected PPS equipment used to improve PPS security enhancements (example: CCTV & Interior Sensors)



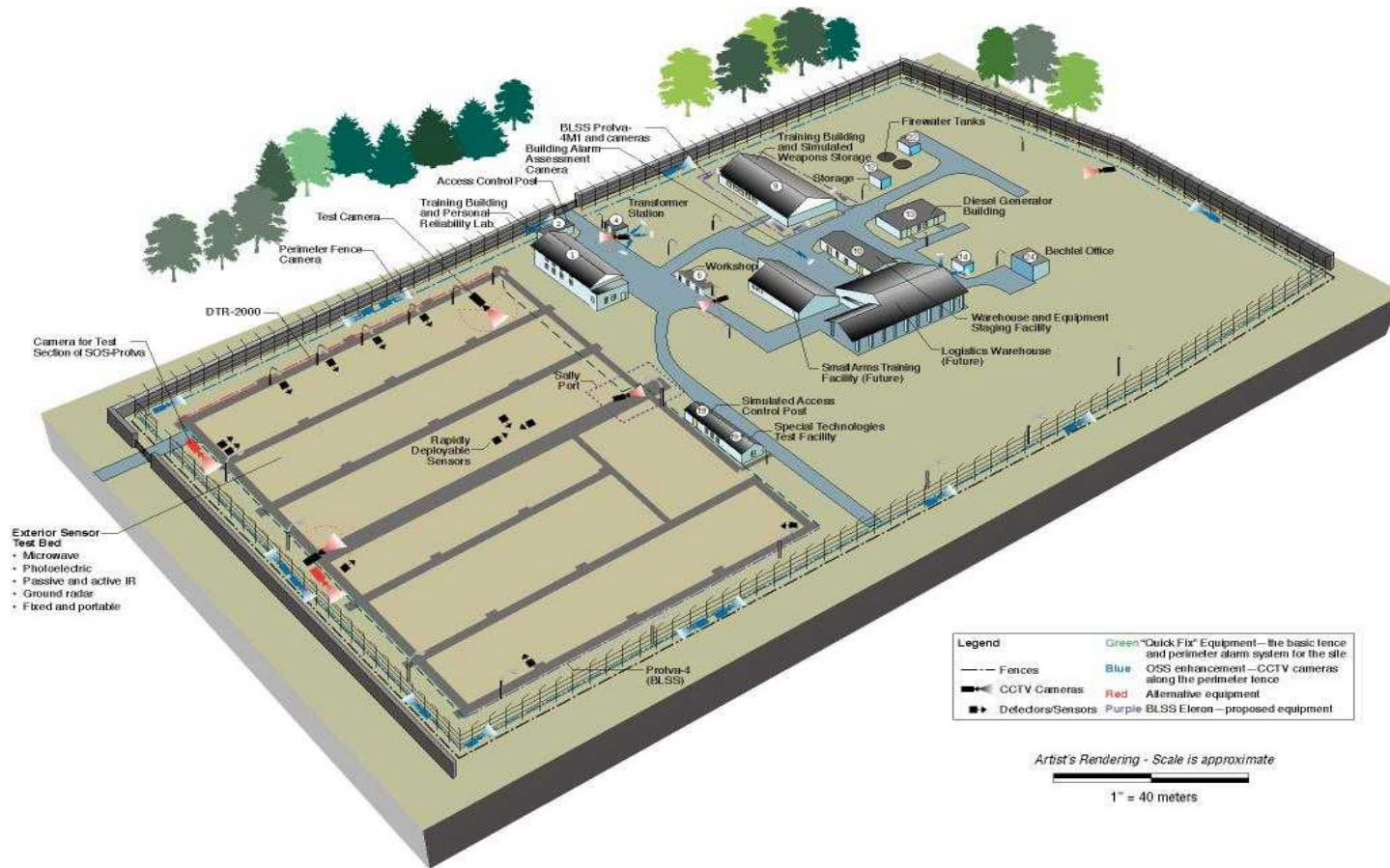
***Quick Fix PPS and MILPAC Rapid Deployable Sensor System***





# Security Assessment, Training, and Logistics

## (Security Assessment and Training Center - SATC)



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# SATC



- ***Project Description:***

- The Security Assessment & Training Center (SATC) was constructed to enable DoD & MOD personnel to test, select, & integrate a PPS equipment required to enhance security at MOD WMD storage sites

- ***Activity:***

- SecDef Cohen & MinDef Sergeev dedicated site Feb 98
- PPS testing completed and final comprehensive suite of equipment identified
  - Joint Task - used over 40 MOD troops and American contractors
- Joint DoD-MOD Agreement of final comprehensive PPS suite in Oct 2001



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# *Site Security Enhancements*

## *(Quick Fix)*

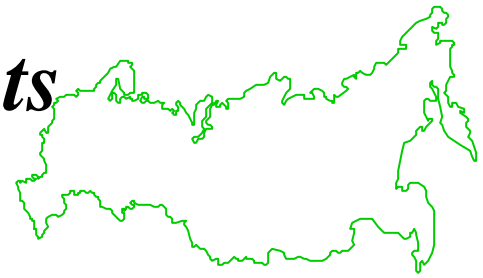


Equipment used at active  
Russian nuclear weapon storage  
sites



# *Site Security Enhancements*

## *(Quick Fix)*



- ***Project Description:***

- Provide 123 one km sets of perimeter security fencing consisting of an inner & outer layer of security fence (IZP) surrounding a vibration cable sensed fence with microwave sensors, installed at designated nuclear weapons storage structures to address urgent MOD security requirements
- Procured snowblowers, boilers, installation equipment, initial fire protection equipment to enhance nuclear security dismantlement operations

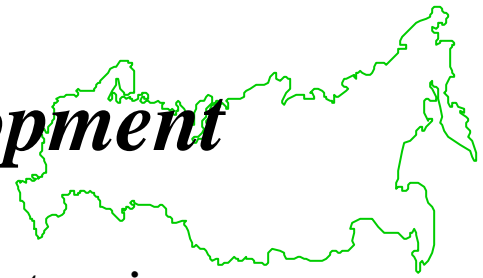
- ***Schedule:***

- Russian funded Quick Fix installation continues at slow pace. Only one-third currently installed; original schedule was for MOD to complete by Dec 2000



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# *Comprehensive PPS Suite Development*



- *Tested and selected PPS equipment from the following nine categories:*
  - PPS Command and Control System (C2)
  - Closed-Circuit Television System (CCTV)
  - Intrusion Detection Equipment (Interior and exterior IDS)
  - Rapid Deployable Sensor Systems
  - Access Control Systems
  - Vehicle/Personnel Barrier and access delay systems
  - Hazardous/Prohibited Material Detection Systems (metal, explosive, nuclear)
  - Fire and Safety System
  - Guard Force Equipment



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# Comprehensive PPS Suite of Equipment

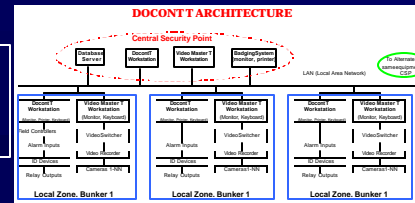
Delfine acoustic sensors &  
Protva Microwave



Bi-Static Microwave



**C & C**  
• **DOCONT**



Proximity  
Card Reader



Mono Static  
Microwave



## INT/EXT SENSORS

- Eleron Konus -3M
- Eleron Don-M
- Eleron DPMGR2 BMS
- Tenzor SOS/Protva
- Conversia RLD-94
- Pulnix Cerberus



Infrared  
photoelectric



Bistatic Microwave



## RAPIDLY DEPLOYABLES

- Southwest MILPAC- 385
- Senstar Repels



Electromagnetic  
W/parallel cables

## ACCESS CONTROL

- HID Card Readers
- Recognition Systems
- Handkey Hand Identifier
- A/P Badging System
- Conversia Mantrap
- EVS Turnstiles



OMA



## HAZ/PROHIB ITEM DETECTION

- Eleron Priznak Metal Detector
- Garrett Metal Detector
- TSRM 61 Pedestrian SNM Detector
- TSRM 61 Vehicle SNM Detector
- Barringer Explosives Detector

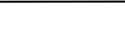


Ionscan 400B



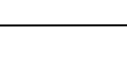
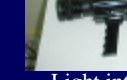
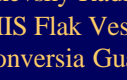
## CCTV

- A/P VideoMaster
- A/P Video Recorder
- Phillips LTC 0330



## GUARD FORCE

- Izhevsky Radios
- NIIS Flak Vest
- Conversia Guard Towers
- Voron Night Vision Device



## BARRIERS & ACCESS DELAY

- Delta Vehicle Barriers
- Inferno Acoustic Denial
- Smokecloak

Visual Obscuring



Level III

## FIRE SAFETY

- Elat Smoke Detection
- Tenzor Fire Suppression

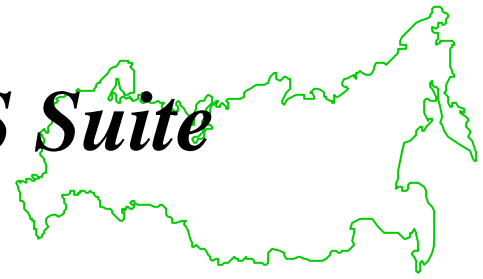


Before & After



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# *Delivery of Comprehensive PPS Suite*

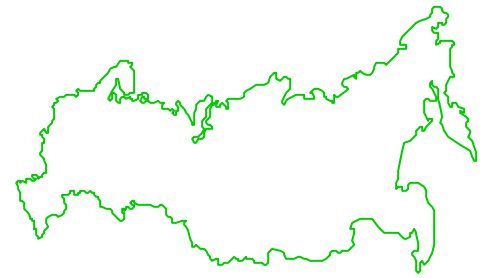


- ***Project Description:***
  - Obtain pre-approved MOD site access for DoD funded PPS installation assistance
  - Conduct Site Surveys & Vulnerability Assessments (VAs) to determine PPS weakness
    - Includes use of DOE Analytic System and Software for Evaluating Safeguards and Security (ASSESS) system - before and after PPS design
  - Conduct PPS design based on Comprehensive PPS Suite - goal to standardize systems throughout Russian Federation
  - Procure and conduct check-out test of comprehensive suite of PPS equipment at SATC
  - Install PPS equipment, including Quick Fix (if necessary) at MOD designated sites
  - Conduct extensive PPS training at SATC
- ***Schedule:*** Estimated 7-9 years to complete PPS installation at all sites with current Russian vendors



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# ***CHALLENGES***



- Positive execution on part of MOD in regards to previous agreement to allow site access required for DoD funded PPS installation
- Joint prioritization of site security upgrades and limited site information
- Effective use of Russian vendors for VA/Design/Installation/Training
- Efficient procurement and certification of Western manufactured PPS equipment
- Coordinating site access visits for verification of work progress
- Training the right MOD personnel to operate Comprehensive PPS equipment
- Number of sites (funding impact and subcontractor availability issue)
- Weather impact on PPS installation schedule
- Addressing protection of sensitive information
- Solving current de-certification work-stoppage issue



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# *Conclusions*

- The US/Russian Partnership in Nuclear Security Is an Innovative Way to Leverage the Knowledge of both Nuclear Security Establishments
- Knowledge gained in Russian Forces nuclear security can be applied to the RF biological and chemical security programs